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EXAMINER

JAGAN, MIRELLYS

ART UNIT	PAPER NUMBER
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2859

DATE MAILED: 05/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/607,109

Applicant(s)

HOLLANDER ET AL.

Examiner

Mirellys Jagan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 74-85 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 74-85 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 June 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6/26/03
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

In paragraph [0001] of the specification, "pending" should be deleted from lines 1 and 3; -- now U.S. Patent 6, 659, 639-- should be added after "September 2002," in line 2; ". U.S. Serial No. 08/843,927" should be replaced with --, which-- in lines 8-9; --, now U.S. Patent 5,823,678,- should be added before "and 08,617,265," in line 11; --, now U.S. Patent 5,727,880-- should be added after "March 1996" in line 11; and "-in-part" should be deleted from line 16. Appropriate correction is required.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, a diffractive lens used with individual lasers, as claimed in claims 84 and 85, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

3. Claims 74-85 are objected to because of the following informalities:

In claim 74, there is lack of antecedent basis in the disclosure for each of the at least three lasers directing more than one beam, as stated by the phrase "at least one" beam in lines 7-8.

In claim 75, there is lack of antecedent basis in the original specification for the lasers being moveable and directable (see page 19, paragraph 74; and pages 24-25, paragraphs 90-92).

In claim 77, there is lack of antecedent basis in the claim for "said at least one laser" in lines 1-2 (claim 1 states that there are "at least three" lasers).

In claim 78, there is lack of antecedent basis in the original specification for the lasers directing a beam to the center of the field of view (see page 19, paragraph 74, lines 4-6; pages 24-25, paragraphs 90-92; and page 26, paragraph 94).

In claim 81, "radiometer" should be changed to --radiation-- in line 2.

In claims 82-84, "In an" should be replaced with --An--; and --further comprising-- should be added after "claim 81," in lines 1, respectively.

In claim 83, there is lack of antecedent basis in the original specification for the brightness of the lasers being changed by switching the laser electric supply (see page 19, paragraph 74, lines 4-6; pages 24-25, paragraphs 90-92; and page 26, paragraph 94).

In claim 84, there is lack of antecedent basis in the original specification for using a diffraction lens with the at least three lasers (see figures 5 and 14-16; page 19, paragraph 74, lines 4-6; pages 24-25, paragraphs 90-92; and page 26, paragraph 94).

In claim 85, there is lack of antecedent basis in the original specification for the use of a "diffraction lens". The specification states that the optical means is a beam splitter, or a diffraction device such as a grating or holographic component, but does not disclose the optical means being a diffractive lens. Furthermore, there is lack of antecedent basis in the original

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specification for using a diffraction lens with the at least three lasers (see figures 5 and 14-16; page 19, paragraph 74, lines 4-6; pages 24-25, paragraphs 90-92; and page 26, paragraph 94).

Claims 76, 79, and 80 are objected to for being dependent on an objected base claim.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 75, 78, and 83-85 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter that was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In claim 75, the specification does not disclose the lasers being moveable and directable (see figures 5 and 14-16; page 19, paragraph 74; and pages 24-25, paragraphs 90-92).

In claim 78, the specification does not disclose the lasers directing a beam to the center of the field of view (see figures 5 and 14-16; page 19, paragraph 74, lines 4-6; pages 24-25, paragraphs 90-92; and page 26, paragraph 94).

In claim 83, the specification does not disclose the brightness of the lasers being changed by switching the laser electric supply (see figures 5 and 14-16; page 19, paragraph 74, lines 4-6; pages 24-25, paragraphs 90-92; and page 26, paragraph 94).

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In claims 84 and 85, the specification does not disclose using a diffraction lens with the lasers. It is not clear how a laser pattern created with a diffraction lens on one of the at least three lasers marks the area being measured. Therefore, claims 84 and 85 have not been further treated on the merits (see figures 5 and 14-16; page 19, paragraph 74, lines 4-6; pages 24-25, paragraphs 90-92; and page 26, paragraph 94).

Double Patenting

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Claims 74 and 78-80 are rejected under the judicially created doctrine of obviousness-type double patenting, as being unpatentable over claim 9 of U.S. Patent No. 5,368,392 [hereinafter the '392 patent] in view of claim 41 of U.S. Patent No. 5,823,679 [hereinafter the '679 patent] and claim 15 of U.S. Patent No. 5,727,880 [hereinafter the '880 patent].

Claim 9 of the '392 patent claims an IR detector (radiometer), which inherently has a field of view, in conjunction with a laser system (laser sighting device) for identifying the measurement area (energy zone) on a target surface from which the detector detects IR radiation

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(for aiming the detector at the target surface area). The system includes means for emitting more than two simultaneous laser beams against the surface having the measurement area to visibly outline the periphery of the area (which visibly identifies the area and location being measured).

Claim 9 does not claim the IR detector and the laser system being mounted on a common hand-held support; the means for emitting more than two simultaneous laser beams being at least three independent spaced apart lasers each directing a visible laser beam onto the surface; and a beam being directed to the center while the others are directed to the edges of the field of view.

Claim 41 of the '679 patent claims a laser beam generating assembly and an IR sensor combined as a hand-held measuring unit. The laser beam generating assembly directs more than two beams, i.e., at least three, toward a zone being measured to display laser spots around the zone from which the radiometer measures the temperature (the field of view). A spot is directed at the center of the zone, and the rest of the spots are directed to outline the zone.

Claim 15 of the '880 patent claims a radiometer with a laser-sighting device for visibly outlining an energy zone to be measured by the radiometer, wherein the laser-sighting device comprises lasers that are spaced apart from each other on either side of an energy zone, i.e., individual lasers, to project at least a pair of beams toward the surface on either side of the energy zone for visibly outlining the energy zone.

Referring to claim 74, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify claim 9 of the '392 patent by claiming that the IR detector and the laser system being mounted on a common hand-held support, as taught by claim 41 of the '679 patent, in order to facilitate aiming the device at the surface being measured.

Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify claim 9 of the '392 patent by claiming that the means for emitting the more than two simultaneous laser beams are independent spaced apart lasers, since claim 15 of the '880 patent teaches that individual lasers are useful means for visibly outlining the area being measured.

Referring to claim 78-80, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify claim 9/41/15 above by claiming that one of the beams is directed to the center of the field of view and the other beams are directed to the edge of the field of view, since claim 41 of the '679 patent teaches that it is useful to provide a center beam when outlining the area, i.e., the field of view, being measured.

8. Claim 75 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 9/41/15, as applied to claims 74 and 78-80 above, and further in view of claim 7 of the '880 patent.

Claim 9/41/15 claims an instrument having all of the limitations of claim 75, as stated above in paragraph 7, except for the lasers being moveable and directable.

Claim 7 of the '880 patent claims a radiometer and a laser sighting device for outlining the energy zone on a surface measured by the radiometer. The device projects at least one laser beam towards the surface and includes means for adjusting the position of the beam, i.e. moving and directing the beam.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify claim 9/41/15 by claiming that the lasers are moveable and

directable, as taught by claim 7 of the '880 patent, in order to enable a user to adjust the location of the beams, if so desired.

9. Claims 76 and 77 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 9/41/15, as applied to claims 74 and 78-80 above, and further in view of claim 1 of U.S. Patent 6,341,891 [hereinafter the '891 patent].

Claim 9/41/15 claims an instrument having all of the limitations of claims 76 and 77, as stated above in paragraph 7, except for the lasers being synchronously pulsed on and off.

Claim 1 of the '891 patent claims a method of measuring temperature by using a radiometer and a laser aiming device for identifying the energy zone on a surface measured by the radiometer. The method projects more than two laser beams towards the surface and includes means for pulsing the beams on and off synchronously.

Referring to claim 76, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify claim 9/41/15 by claiming that the lasers are synchronously pulsed on and off since claim 1 of the '891 patent teaches that it is useful to provide synchronous pulsing beams when marking the area being measured.

10. Claim 83 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 9/41/15 in view of U.S. Patent 5,336,899 to Nettleton et al [hereinafter Nettleton].

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Claim 9/41/15 claims an instrument having all of the limitations of claim 83, as stated above in paragraph 7, except for the instrument further comprising means for adjusting the brightness of the laser beams by switching the electric supply.

Nettleton discloses a range-finding system using a laser to mark a location on a surface. The device pulses a laser on and off and has means for changing the brightness of the laser (the power to a laser must be changed to change the brightness of the laser). Nettleton teaches that it is useful to provide these laser controlling means in order to allow a user to modify the laser beam as desired to better see the laser marking (see column 3, lines 7-20).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify claim 9/41/15 by claiming that the lasers have means for adjusting their brightness, as taught by Nettleton, in order to allow a user to modify the laser beam as desired to better see the laser markings.

11. Claim 81 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 9 of the '392 patent in view of claim 41 of the '679 patent and claim 15 of the '880 patent.

Claim 9 of the '392 patent claims a radiation detector (radiometer), which inherently has a field of view and a longitudinal axis, in conjunction with a laser sighting system (laser sighting device) for identifying the measurement area on a target surface from which the detector detects radiation. The system includes means for emitting more than two simultaneous laser beams against the surface having the measurement area to visibly outline the periphery of the area.

Claim 9 does not claim the detector and the laser system being mounted on a common hand-held support; the means for emitting more than two simultaneous laser beams being two independent spaced apart lasers mounted on opposite sides of the radiometer axis such that a beam from each laser indicate opposite parts of the field of view.

Claim 41 of the '679 patent claims a laser beam generating assembly and an IR sensor combined as a hand-held measuring unit. The laser beam generating assembly directs more than two beams; i.e., at least three, toward a zone being measured to display laser spots around the zone from which the radiometer measures the temperature (the field of view). A spot is directed at the center of the zone, and the rest of the spots are directed to outline the zone.

Claim 15 of the '880 patent claims a radiometer with a laser-sighting device for visibly outlining an energy zone to be measured by the radiometer, wherein the laser-sighting device comprises lasers that are spaced apart from each other on either side of an energy zone to project at least a pair of beams toward the surface on either side of the energy zone for visibly outlining the energy zone.

Referring to claim 81, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify claim 9 of the '392 patent by claiming that the detector and the laser system are mounted on a common hand-held support, as taught by claim 41 of the '679 patent, in order to facilitate aiming the device at the surface being measured.

Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify claim 9 of the '392 patent by replacing the means for emitting the laser beams with two independent spaced apart lasers mounted on opposite sides of

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the radiometer's field of view, since claim 15 of the '880 patent teaches that visibly outlining opposing sides of the field of view is a useful way of indicting the area being measured.

Referring to claim 78-80, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify claim 9/41/15 above by claiming that one of the beams is directed to the center of the field of view and the other beams are directed to the edge of the field of view, since claim 41 of the '679 patent teaches that it is useful to provide a center beam when outlining the area, i.e., the field of view, being measured.

12. Claim 82 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 9/41/15, as applied to claim 81 above, and further in view of claim 1 of the '891 patent.

Claim 9/41/15 claims an instrument having all of the limitations of claim 82, as stated above in paragraph 11, except for the lasers being pulsed.

Claim 1 of the '891 patent claims a method of measuring temperature by using a radiometer and a laser aiming device for identifying the energy zone on a surface measured by the radiometer. The method projects more than two laser beams towards the surface and includes means for pulsing the beams on and off synchronously.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify claim 9/41/15 by claiming that the lasers are pulsed on and off since claim 1 of the '891 patent teaches that it is useful to provide pulsing beams when marking the area being measured.

13. Claim 74, 79, and 80 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 54 of copending Application No. 10/316197 in view of claim 56 of the copending application.

Claim 54 of the copending application claims a radiometer combined with a laser sighting system on a hand-held instrument, where in the radiometer, which inherently has a field of view with an axis, is positioned between more than two separate lasers that are located on opposite sides of the radiometer for projecting more than two laser beams toward a target surface whose temperature is to be measured by the radiometer (the lasers will mark opposite parts of the zone since they are located on opposite sides of the radiometer).

Claim 55 does not claim the beams defining the field of view of the radiometer on the target surface.

Claim 56 of the copending application claims a radiometer, which inherently has a field of view with an axis, combined with a laser sighting system on a hand-held instrument. More than two separate lasers project more than two laser beams toward an energy zone, i.e., field of view, on a target surface from which the temperature is to be measured by the radiometer.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify claim 55 by claiming that the laser beams identify the target area on the surface, since claim 56 of the copending application teaches that it is useful to mark the field of view on the surface when taking temperature measurements.

This is a provisional obviousness-type double patenting rejection.

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14. Claim 75 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 54/56, as applied to claims 74, 79, and 80 above, and further in view of claim 7 of the '880 patent.

Claim 54/56 claims an instrument having all of the limitations of claim 75, as stated above in paragraph 13, except for the lasers being moveable and directable.

Claim 7 of the '880 patent claims a radiometer and a laser sighting device for outlining the energy zone on a surface measured by the radiometer. The device projects at least one laser beam towards the surface and includes means for adjusting the position of the beam, i.e. moving and directing the beam.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify claim 54/56 by claiming that the lasers are moveable and directable, as taught by claim 7 of the '880 patent, in order to enable a user to adjust the location of the beams, if so desired.

This is a provisional obviousness-type double patenting rejection.

15. Claims 76 and 77 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 54/56, as applied to claims 74, 79, and 80 above, and further in view of claim 1 of the '891 patent.

Claim 54/56 claims an instrument having all of the limitations of claims 76 and 77, as stated above in paragraph 13, except for the lasers being synchronously pulsed on and off.

Claim 1 of the '891 patent claims a method of measuring temperature by using a radiometer and a laser aiming device for identifying the energy zone on a surface measured by

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the radiometer. The method projects more than two laser beams towards the surface and includes means for pulsing the beams on and off synchronously.

Referring to claim 76, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify claim 54/56 by claiming that the lasers are synchronously pulsed on and off since claim 1 of the '891 patent teaches that it is useful to provide pulsing beams when marking the area being measured.

This is a provisional obviousness-type double patenting rejection.

16. Claim 78 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 54/56, as applied to claims 74, 79, and 80 above, and further in view of claim 41 of the '679 patent.

Claim 54/56 claims an instrument having all of the limitations of claim 78, as stated above in paragraph 13, except for a beam being directed to the center of the field of view.

Claim 41 of the '679 patent claims a laser beam generating assembly and an IR sensor combined as a hand-held measuring unit. The laser beam generating assembly directs more than two beams, i.e., at least three, toward a zone being measured to display laser spots around the zone from which the radiometer measures the temperature (the field of view). A spot is directed at the center of the zone, and the rest of the spots are directed to outline the zone.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify claim 54/56 by claiming that one of the beams is directed to the center of the field of view since claim 41 of the '679 patent teaches that it is useful to provide a center beam when outlining the area, i.e., the field of view, being measured.

This is a provisional obviousness-type double patenting rejection.

17. Claim 81 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 55 of copending Application No. 10/316197.

Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 55 of the copending application claims a radiometer combined with a laser sighting system on a hand-held instrument, where in the radiometer, which inherently has a field of view with an axis, is positioned between two [separate] lasers that are located on opposite sides of the radiometer for projecting a pair of laser beams toward an energy zone; i.e., field of view, on a target surface whose temperature is to be measured by the radiometer to define the energy zone on the surface (the lasers will mark opposite parts of the zone since they are located on opposite sides of the radiometer).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

18. Claim 82 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 55, as applied to claim 81 above, and further in view of claim 1 of the '891 patent.

Claim 55 claims an instrument having all of the limitations of claim 82, as stated above in paragraph 17, except for the lasers being pulsed.

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Claim 1 of the '891 patent claims a method of measuring temperature by using a radiometer and a laser aiming device for identifying the energy zone on a surface measured by the radiometer. The method projects more than two laser beams towards the surface and includes means for pulsing the beams on and off synchronously.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify claim 55 by claiming that the lasers are pulsed on and off since claim 1 of the '891 patent teaches that it is useful to provide pulsing beams when marking the area being measured.

This is a provisional obviousness-type double patenting rejection.

Claim Rejections - 35 USC § 103

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject-matter pertains: Patentability shall not be negated by the manner in which the invention was made.

20. Claims 74, 79, and 80 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent 57-0022521 to Horiba in view of U.S. Patent 4,315,150 to Darringer et al [hereinafter Darringer].

Horiba discloses a system comprising a radiometer (3) mounted between a pair of light sources (5) that are positioned approximately 180° apart and are adapted to project a pair of collimated light beams toward an energy zone on a target surface (2) whose temperature is to be

measured by the radiometer, thereby providing spaced apart light spots on the surface in order to define/display/identify the energy zone measured on the surface (see figure 1).

Horiba does not disclose the light sources being lasers; the light sources and the radiometer are mounted on a common hand-held support; and the system comprising additional lasers.

Darringer discloses a temperature measurement device comprising an IR detector and a laser light source for projecting a light beam and aiming the device at a target surface. The device has the light source and the radiometer mounted on a common pistol-grip support to facilitate aiming the device at the surface.

Referring to claim 74, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device disclosed by Horiba by mounting the light sources and the radiometer on a common hand-held support, as taught by Darringer, in order to facilitate aiming the device at the surface.

Also, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device disclosed by Horiba by replacing the light sources with a laser light sources, since Darringer teaches that lasers are useful means for providing collimated light beams when indicating the location of a measurement zone on a surface.

Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device disclosed by Horiba and Darringer by providing additional lasers to provide additional laser spots on the surface in order to create a more visible marking of the area on the surface, and since it has been held that the mere

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duplication of the essential working parts of a device involves only routine skill in the art. See St. Regis Paper Co. v. Bemis Co., 193 USPQ 8.

21. Claims 75 and 78 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horiba and Darringer, as applied to claims 74, 79, and 80 above, and further in view of German Patent 19528590 to Schmidt et al [hereinafter Schmidt].

Horiba and Darringer disclose a device having all of the limitations of claims 75 and 78, as stated above in paragraph 20, except for at least one laser being movable and directable, and one of the laser beams being directed to the center of the field of view.

Schmidt discloses a laser thermometer device comprising an IR detector, an optical system, and a sighting arrangement comprising a laser and a diffraction optical system having a diffraction optical lens that splits a beam and is aligned to be illuminated by a single laser beam from the laser to emit more than two divergent beams to produce a pattern on the measurement spot in the form of a light intensity distribution which includes a 0th order spot at the center of the measurement spot and a visible laser ring of spaced apart light spots displaced from the center point, a beam splitter positioning the circle for identifying and outlining the position, size, and edge of the field of view on the measurement spot by display of visible light including the center spot of the measurement spot to facilitate sighting.

Referring to claim 75, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Horiba and Darringer by making one of the lasers moveable and directing it toward the center of the field of view, since Schmidt teaches that it is useful to also mark the center spot of a measurement spot to facilitate sighting.

Referring to claim 78, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Horiba and Darringer by orienting one of the laser beams to the center of the field of view, since Schmidt teaches that it is useful to also mark the center spot of a measurement spot to facilitate sighting.

22. Claims 76, 77, and 83 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horiba and Darringer, as applied to claims 74, 79, and 80 above, and further in view of Nettleton.

Horiba and Darringer disclose a device having all of the limitations of claims 75 and 78, as stated above in paragraph 20, except for the lasers being pulsed on and off synchronously, and the device having means for changing the brightness of the lasers by switching the laser electric supply.

Nettleton discloses a range-finding system using a laser to mark a location on a surface. The device pulses a laser on and off and has means for changing the brightness of the laser (the power to a laser must be changed to change the brightness of the laser). Nettleton teaches that it is useful to provide these laser controlling means in order to allow a user to modify the laser beam as desired to better see the laser marking (see column 3, lines 7-20).

Referring to claim 76, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Horiba and Darringer by providing means for pulsing the lasers on and off, as taught by Nettleton, in order to allow a user to obtain a better view of the laser spots on the surface.

Referring to claim 77, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Horiba, Darringer, and Nettleton by making the lasers pulse synchronously in order to continuously maintain at least one beam visible on the surface being measured.

Referring to claim 83, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Horiba and Darringer by providing means for changing the brightness of the lasers, as taught by Nettleton, in order allow a user to change the brightness to obtain a better view of the laser spots on the surface.

23. Claim 81 is rejected under 35 U.S.C. 103(a) as being unpatentable over Horiba in view of Darringer.

Horiba discloses a system comprising a radiometer (3) mounted between a pair of light sources (5) that are positioned approximately 180° apart and are adapted to project a pair of collimated light beams toward an energy zone on a target surface (2) whose temperature is to be measured by the radiometer in order to define/display/identify the energy zone measured on the surface (see figure 1).

Horiba does not disclose the light sources being lasers, and the light sources and the radiometer are mounted on a common hand-held support.

Darringer discloses a temperature measurement device comprising an IR detector and a laser light source for projecting a light beam and aiming the device at a target surface. The device has the light source and the radiometer mounted on a common pistol-grip support to facilitate aiming the device at the surface.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device disclosed by Horiba by mounting the light sources and the radiometer on a common hand-held support, as taught by Darringer, in order to facilitate aiming the device at the surface.

Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device disclosed by Horiba by replacing the light sources with a laser light sources, since Darringer teaches that lasers are useful means for providing collimated light beams when indicating the location of a measurement zone on a surface.

24. Claim 82 is rejected under 35 U.S.C. 103(a) as being unpatentable over Horiba and Darringer, as applied to claim 81 above, and further in view of Nettleton.

Horiba and Darringer disclose a device having all of the limitations of claim 82, as stated above in paragraph 23, except for the lasers being pulsed.

Nettleton discloses a range-finding system using a laser to mark a location on a surface. The device pulses a laser on and off and has means for changing the brightness of the laser (the power to a laser must be changed to change the brightness of the laser). Nettleton teaches that it is useful to provide these laser controlling means in order to allow a user to modify the laser beam as desired to better see the laser marking (see column 3, lines 7-20).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Horiba and Darringer by providing means for

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pulsing the lasers, as taught by Nettleton, in order to allow a user to obtain a better view of the laser spots on the surface.

Conclusion

25. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following publications disclose optical devices:

Teledyne Brown Engineering, 'Multibeam Splitters' (flyer), circa 1994.

Teledyne Brown Engineering, "Diffraction-Optic Gratings", Photonics Spectra, September 1994, p.186.

Lasiris Holographie, "Diffraction Gratings", Photonics Spectra, August 1990, p.156.

Lasiris Holographie, "Beamsplitter Gratings", Photonics Spectra, June 1991, p.194, 198.

Photonics Spectra, Circle No. 356, March 1992, p.203.

Photonics Spectra, Circle No. 84, August 1992, p.76.

Photonics Spectra, Circle No. 79, February 1993, p.158.

Photonics Spectra, Circle No. 74, January 1994, p.170.

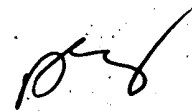
26. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mirellys Jagan whose telephone number is 571-272-2247. The examiner can normally be reached on Monday-Friday from 9AM to 4PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez can be reached on 571-272-2245. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MJ
May 20, 2004



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